Unit and non-unit fractions

1 Write fractions to complete the sentences.

a) $\frac{1}{3}$ of the counters are yellow.

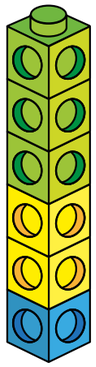
b) $\frac{2}{3}$ of the counters are red.

2 Write fractions to complete the sentences.

a) $\frac{3}{6}$ of the tower is green.

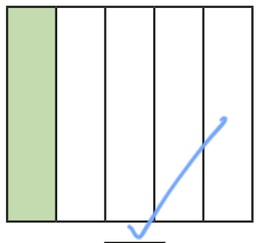
b) $\frac{2}{6}$ of the tower is yellow.

c) $\frac{1}{6}$ of the tower is blue.

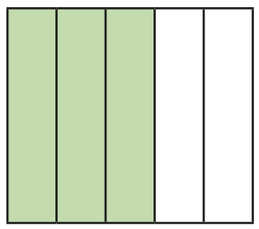


3 What fraction of each shape is shaded?

a)

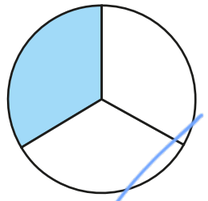


$\frac{1}{5}$

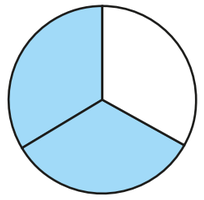


$\frac{3}{5}$

b)

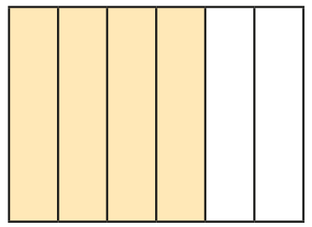


$\frac{1}{3}$

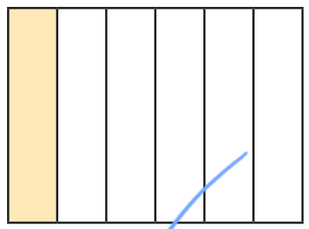


$\frac{2}{3}$

c)

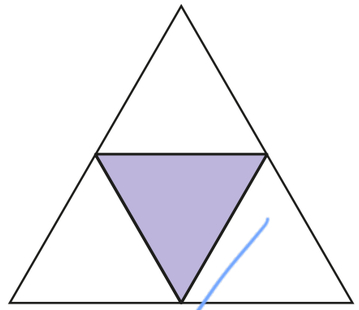


$\frac{4}{6}$

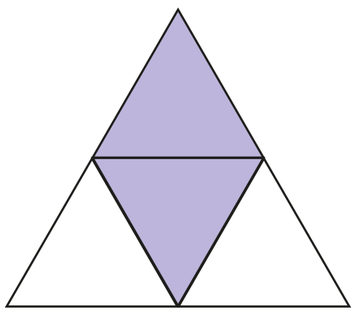


$\frac{1}{6}$

d)

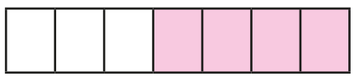


$\frac{1}{4}$



$\frac{2}{4}$

e)



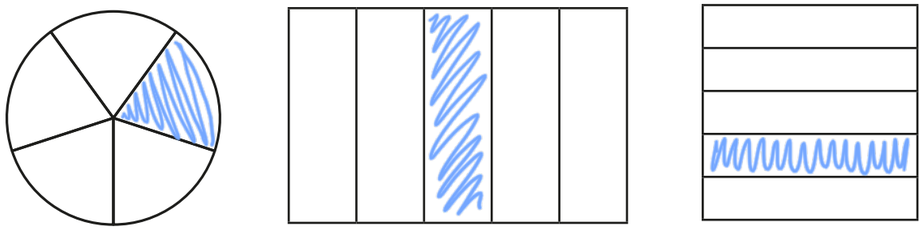
$\frac{4}{7}$

$\frac{1}{7}$

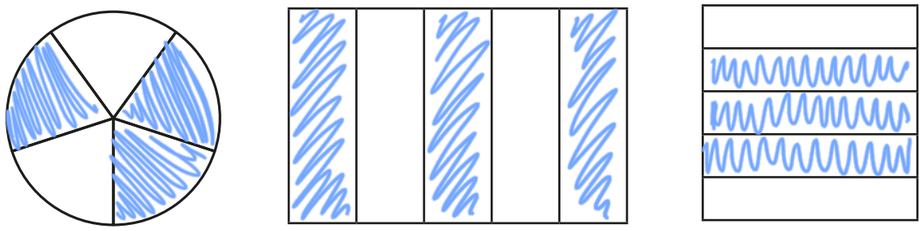
Tick the unit fraction in each pair of shapes.

How did you know which was the unit fraction?

4 **a)** Colour $\frac{1}{5}$ of each shape.

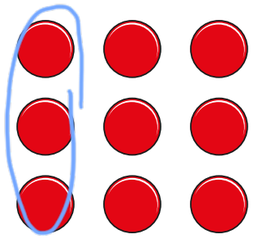


b) Colour $\frac{3}{5}$ of each shape.

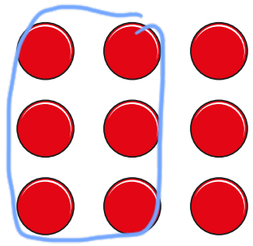


What is the same and what is different about your answers?

5 **a)** Circle $\frac{1}{3}$ of the counters.



b) Circle $\frac{2}{3}$ of the counters.



What is the same and what is different about your answers?

6 Write the fractions in the table.

$\frac{1}{6}$	$\frac{2}{3}$	$\frac{3}{4}$	$\frac{1}{10}$	$\frac{1}{8}$
$\frac{3}{5}$	$\frac{1}{4}$	$\frac{1}{99}$	$\frac{6}{1}$	$\frac{1}{250}$

Unit fractions	Non-unit fractions
$\frac{1}{6}$ $\frac{1}{4}$ $\frac{1}{99}$ $\frac{1}{10}$ $\frac{1}{8}$ $\frac{1}{250}$	$\frac{6}{1}$ $\frac{3}{4}$ $\frac{2}{3}$ $\frac{3}{5}$

Write two more examples of your own in each column.

7 **a)** What is a unit fraction? What is a non-unit fraction?

Talk about it with a partner.

b) Complete the sentences.

An example of a unit fraction is $\frac{1}{5}$

The numerator is always 1

An example of a non-unit fraction is $\frac{3}{5}$

The numerator is always greater than 1

Making the whole

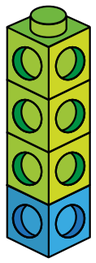
1 Here are some counters.

a) What fraction of the counters are yellow? $\frac{3}{5}$

b) What fraction of the counters are red? $\frac{2}{5}$

c) Complete the number sentence. $\frac{3}{5} + \frac{2}{5} = \frac{5}{5}$

2 Complete the sentences.



a) What fraction of the tower is green? $\frac{3}{4}$

b) What fraction of the tower is blue? $\frac{1}{4}$

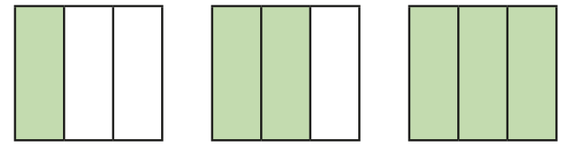
c) Complete the number sentence. $\frac{3}{4} + \frac{1}{4} = \frac{4}{4}$

3 What fraction of each shape is shaded?

Which fraction represents a whole?

Fill in the missing fractions.

a)

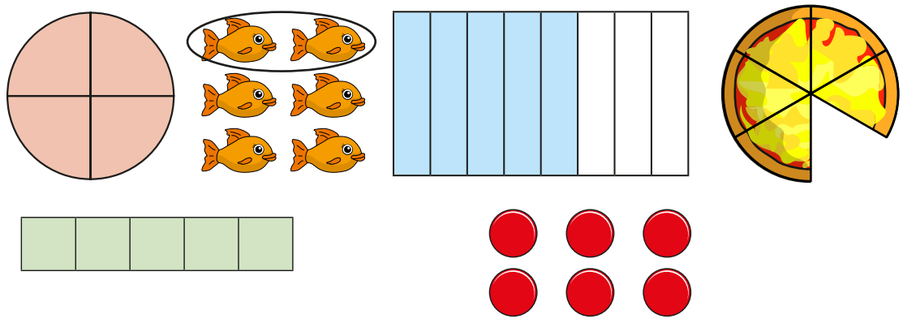


$\frac{1}{3}$ $\frac{2}{3}$ $\frac{3}{3}$ $\frac{3}{3}$ = one whole

b)

$\frac{1}{2}$ $\frac{2}{2}$ $\frac{2}{2}$ = one whole

4 Here are some pictures.



Use the pictures to help you answer the questions.

a) Write three fractions that are less than one whole.

$\frac{2}{6}$ $\frac{5}{8}$ $\frac{5}{6}$

b) Write three fractions that are equal to one whole.

$\frac{4}{4}$ $\frac{5}{5}$ $\frac{6}{6}$

What do you notice? Talk about it with a partner.

5 Choose a phrase to complete the sentences.

greater than	less than	equal to

When the numerator is less than the denominator, the fraction is less than one whole.

When the numerator is equal to the denominator, the fraction is equal to one whole.

6 Circle the fractions that are equivalent to one whole

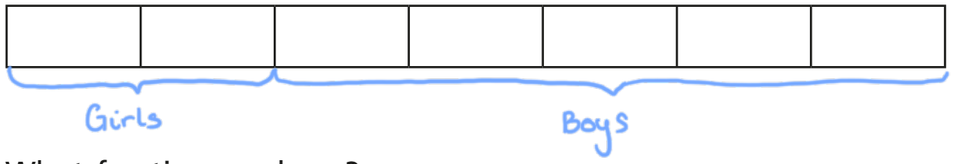
$\frac{3}{5}$ $\frac{4}{4}$ ✓ $\frac{6}{10}$ $\frac{2}{2}$ ✓

$\frac{10}{10}$ ✓ $\frac{8}{9}$ $\frac{3}{3}$ ✓ $\frac{5}{5}$ ✓

7 Here are $\frac{1}{3}$ of Jack's marbles.

Draw the rest of Jack's marbles in the bar model.

8 $\frac{2}{7}$ of a group of children are girls.



What fraction are boys?

$\frac{5}{7}$ are boys.

9 Each bar model is worth one whole.

Split the bar model and label the missing fractions.

$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$

$\frac{1}{5}$	$\frac{1}{5}$	$\frac{1}{5}$	$\frac{1}{5}$	$\frac{1}{5}$

$\frac{7}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$

10 Complete the number sentences.

a) $\frac{3}{5} + \boxed{\frac{2}{5}} = 1$

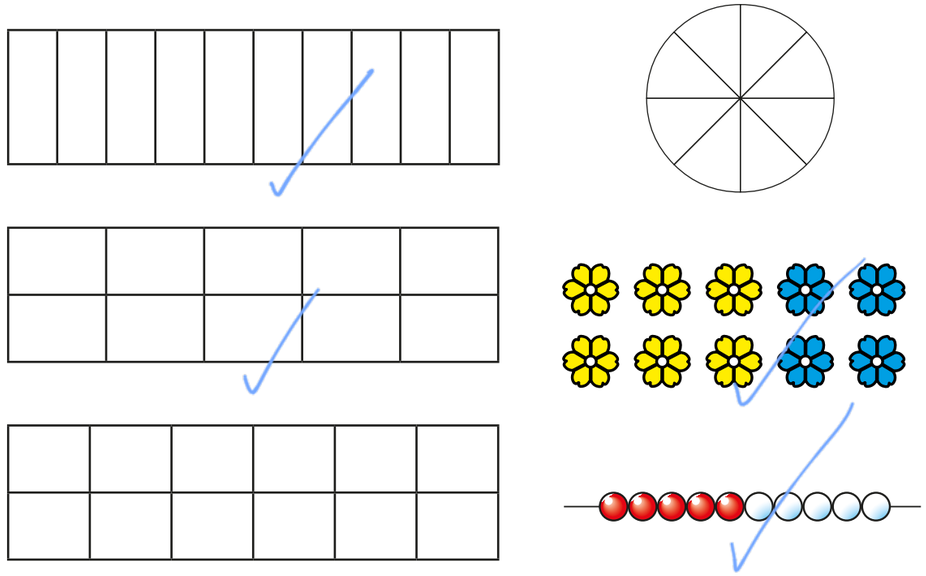
b) $\boxed{\frac{6}{10}} + \frac{4}{10} = 1$

c) $\boxed{1} = \frac{2}{7} + \frac{5}{7}$

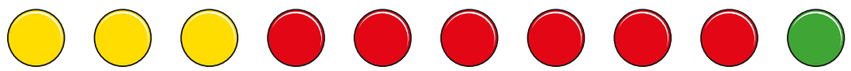
d) $\frac{9}{9} = \boxed{\frac{4}{9}} + \frac{5}{9}$

Tenths

1 Tick the pictures that show tenths.



2 Write fractions to complete the sentences.



a) $\frac{3}{10}$ of the counters are yellow.

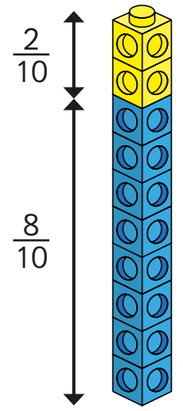
b) $\frac{6}{10}$ of the counters are red.

c) $\frac{1}{10}$ of the counters are green.

3 Amir has some blue and yellow cubes.

He makes a tower using 10 cubes.

Investigate how many different towers Amir can make with 10 cubes, if every tower has a different fraction of blue and yellow cubes.

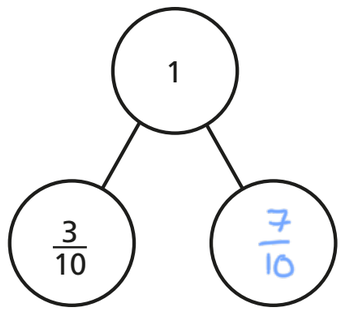


Possible answers:

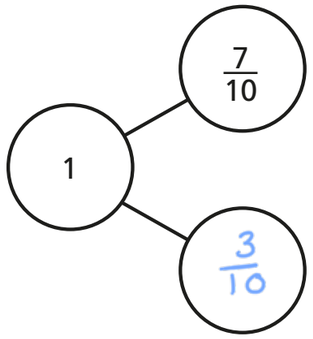
Yellow	$\frac{0}{10}$	$\frac{1}{10}$	$\frac{2}{10}$	$\frac{3}{10}$	$\frac{4}{10}$	$\frac{5}{10}$	$\frac{6}{10}$	$\frac{7}{10}$	$\frac{8}{10}$	$\frac{9}{10}$	$\frac{10}{10}$
Blue	$\frac{10}{10}$	$\frac{9}{10}$	$\frac{8}{10}$	$\frac{7}{10}$	$\frac{6}{10}$	$\frac{5}{10}$	$\frac{4}{10}$	$\frac{3}{10}$	$\frac{2}{10}$	$\frac{1}{10}$	$\frac{0}{10}$

4 Complete the part-whole models.

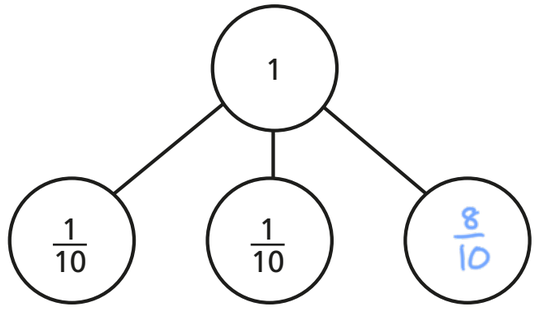
a)



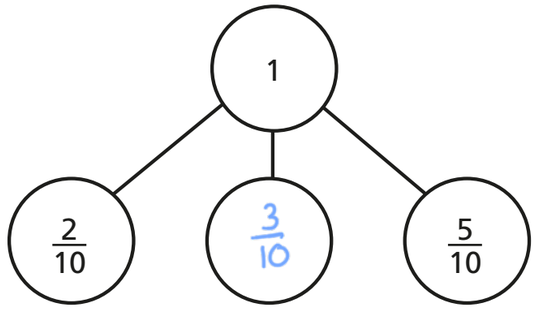
b)



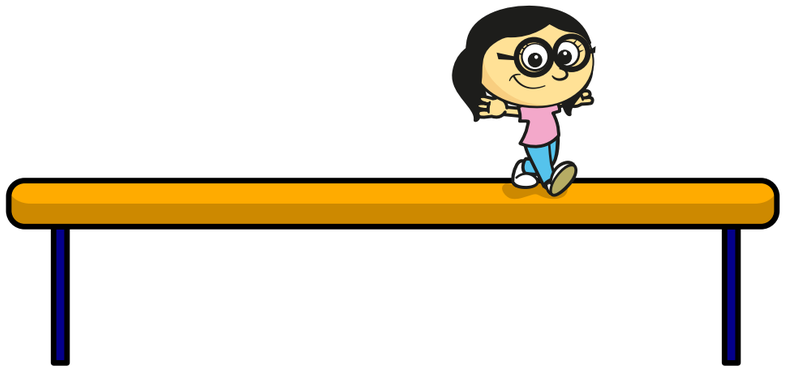
c)



d)



5 Annie has travelled $\frac{7}{10}$ of the way across a balance beam.



How many tenths does she have left to travel?

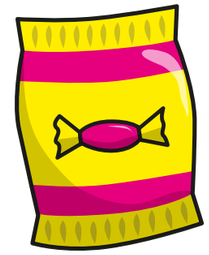
$\frac{3}{10}$

6 10 boys share 3 pizzas equally.

What fraction of a pizza do they each get?

$\frac{3}{10}$

7 Dani has a bag of sweets.



$\frac{1}{2}$ of the sweets are red.

$\frac{3}{10}$ of the sweets are yellow.

The rest are green.

What fraction of the sweets are green?

$\frac{2}{10}$

8 Mo also has a bag of sweets.

$\frac{4}{10}$ of his sweets are red.

The rest are green or yellow.

What fraction of Mo's sweets could be green?

e.g. $\frac{1}{10}$

What fraction could be yellow?

$\frac{5}{10}$

How many possible answers can you find?

Possible answers:

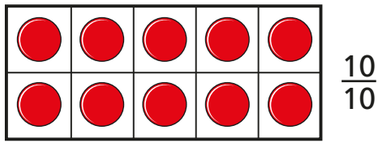
Green $\frac{0}{10}$ $\frac{1}{10}$ $\frac{2}{10}$ $\frac{3}{10}$ $\frac{4}{10}$ $\frac{5}{10}$ $\frac{6}{10}$

Yellow $\frac{6}{10}$ $\frac{5}{10}$ $\frac{4}{10}$ $\frac{3}{10}$ $\frac{2}{10}$ $\frac{1}{10}$ $\frac{0}{10}$

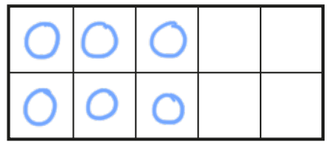
Compare answers with a partner.

Count in tenths

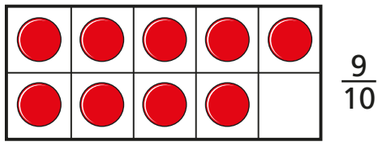
1 Continue the sequence.



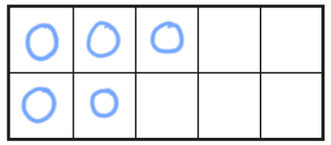
$\frac{10}{10}$



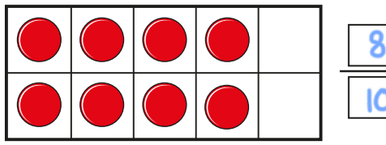
$\frac{6}{10}$



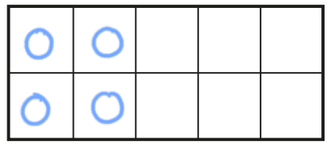
$\frac{9}{10}$



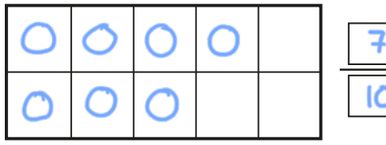
$\frac{5}{10}$



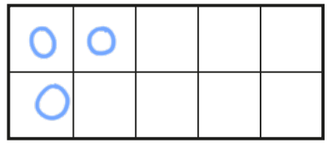
$\frac{8}{10}$



$\frac{4}{10}$

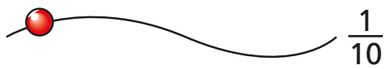


$\frac{7}{10}$



$\frac{3}{10}$

2 Continue the sequence.



$\frac{1}{10}$

$\frac{4}{10}$

$\frac{2}{10}$

$\frac{5}{10}$

$\frac{3}{10}$

$\frac{6}{10}$

3 Write the missing fractions in each sequence.

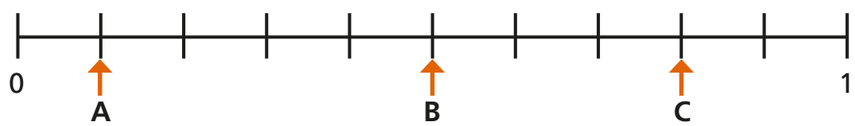
a)

$\frac{1}{10}$	$\frac{2}{10}$	$\frac{3}{10}$	$\frac{4}{10}$	$\frac{5}{10}$
$\frac{6}{10}$	$\frac{7}{10}$	$\frac{8}{10}$	$\frac{9}{10}$	$\frac{10}{10}$

b)

$\frac{10}{10}$	$\frac{9}{10}$	$\frac{8}{10}$	$\frac{7}{10}$	$\frac{6}{10}$
$\frac{5}{10}$	$\frac{4}{10}$	$\frac{3}{10}$	$\frac{2}{10}$	$\frac{1}{10}$

4 What fraction is each arrow pointing to?

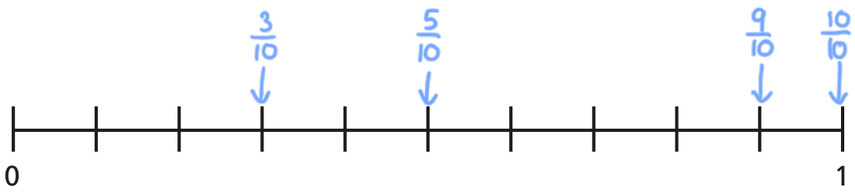


A = $\frac{1}{10}$ B = $\frac{5}{10}$ C = $\frac{8}{10}$

5 Write the fractions in the correct places on the number lines.

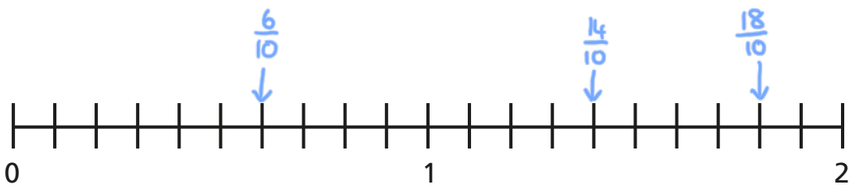
a)

$\frac{5}{10}$ $\frac{9}{10}$ $\frac{3}{10}$ $\frac{10}{10}$



b)

$\frac{6}{10}$ $\frac{14}{10}$ $\frac{18}{10}$



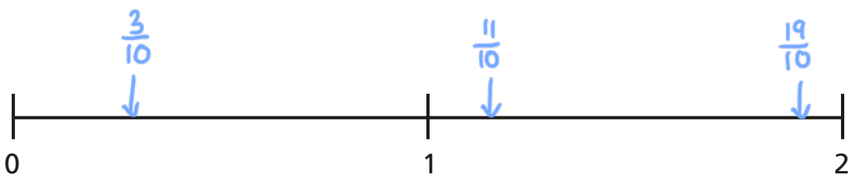
6 Draw and label arrows to estimate the position of the fractions on the number lines.

a)

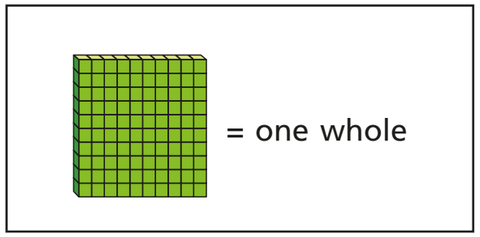
$\frac{5}{10}$ $\frac{15}{10}$ $\frac{20}{10}$

b)

$\frac{3}{10}$ $\frac{11}{10}$ $\frac{19}{10}$

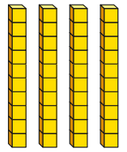


7



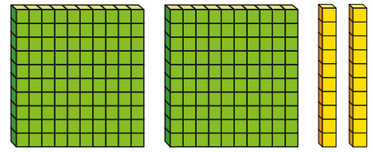
What number is represented in each picture?

a)



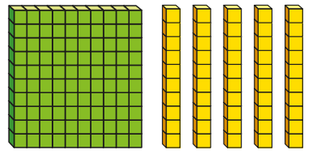
$\frac{4}{10}$

c)



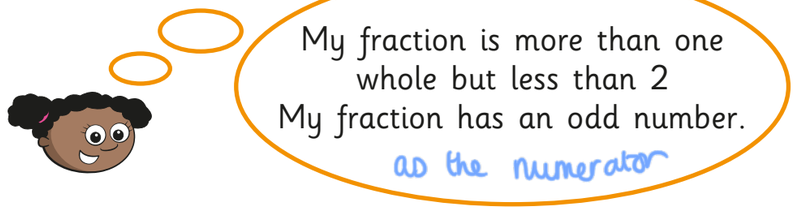
$\frac{22}{10}$

b)



$\frac{15}{10}$

8 Whitney is thinking of a fraction.



What could Whitney's fraction be?

List all the possible fractions.

Compare answers with a partner.